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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/520,011 | 12/29/2004 | Walter Musial | NREL 01-51 | 6976 |

7590 01/28/2010
Paul J White Senior Patent Counsel
National Renewable Energy Laboratory
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| EXAMINER |
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HUYNH, PHUONG

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| ART UNIT | PAPER NUMBER |
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2857

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01/28/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/520,011 | Applicant(s) MUSIAL ET AL. | |
| | Examiner PHUONG HUYNH | Art Unit 2857 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 9-12, and 21 is/are rejected.
- 7) ☒ Claim(s) 2-4, 6-8, 13-16 and 18-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, 9, 12 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Magnussen et al. (hereinafter "Magnussen") (USPAP. 2002/0038987).

Regarding claims 1 and 17, Magnussen discloses an apparatus for applying at least one cyclical load to a specimen the specimen extending at least along a longitudinal axis, comprising:

a mass; an actuator mounted to the specimen and operatively associated with said mass, said actuator moving said mass along a linear displacement path that is perpendicular to the longitudinal axis of the specimen, wherein the specimen comprises a wind turbine blade that is rigidly mounted at a root end and unsupported at a tip end and wherein the actuator is mounted at a location between the root end and the tip end of the specimen such that the moving of the mass relative to the wind turbine blade

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applies a bending load to the specimen (see Magnussen: Paragraphs [0038], [0329]; [0456]);

and a control system operatively associated with said actuator, said control system operating said actuator to reciprocate said mass along the linear displacement path at a reciprocating frequency, said reciprocating frequency being about equal to a resonance frequency of the specimen in a test configuration causing displacement of the tip relative to the longitudinal axis of the specimen (see Magnussen: Paragraphs [[0456], [0460], and [0461]).

Regarding claim 5, Magnussen discloses a load frame mounted directly to the specimen, said actuator being mounted to said load frame (see Magnussen: Paragraph [0173] and [0174]).

Regarding claim 9, Magnussen discloses a static mass (static pre-load) mounted to the specimen [see Magnussen: Paragraph [0174]).

Regarding claim 12, Magnussen discloses a method for vibrating a wind turbine blade specimen, the specimen extending at least along a longitudinal axis from a root to a tip, comprising:

mounting a mass to the specimen nearer to the tip than to the root so that said mass can be reciprocated along a linear displacement path that is perpendicular to the

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longitudinal axis of the specimen to apply a flap load to the specimen (see Magnussen: Paragraphs [0038], [0329], [0356], [0456], [0173], [0174]); and

reciprocating the mass along the linear displacement path at a reciprocation frequency that is about equal to a resonance frequency of the specimen in a test configuration (see Magnussen: Paragraphs [0329], [0356], [0456], [0461], [0173] and [0174]).

Regarding claim 21, Magnussen discloses said control system comprises a PID controller [see Magnussen: Paragraph [0430]].

3. Claims 10 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Davidson et al. (hereinafter "Davidson") (USPN. 6,601,456).

Regarding claim 10, Davidson discloses a system for vibrating a specimen, the specimen extending at least along a longitudinal axis from a first to a second end [see Davidson: Abstract] [see Davidson: Figure 3, along the length of specimen 21], comprising:

reciprocating mass means [see Davidson: Figure 34, 23a] operatively associated with the specimen for sinusoidally vibrating the specimen along the longitudinal axis at about a resonance frequency of the specimen in a test configuration, wherein the specimen is rigidly supported at the first end and unsupported at the second end and wherein the reciprocating mass means is mounted to the specimen at a location between the first and second ends [see Davidson: col. 8, lines 17-27]; and

displacement control means operatively associated with said reciprocating mass means for varying a vibrational displacement of the specimen [see Davidson: col. 9, lines 3-17].

Regarding claim 11, Davidson discloses said reciprocating mass means comprises: a mass; and actuator means operatively associated with said mass for reciprocating said mass along a displacement path that is perpendicular to the longitudinal axis of the specimen [see Davidson: col. 7, lines 13-29; col. 8, line 50-col. 9, line 3;

Allowable Subject Matter

4. Claims 2-4, 5, 7, 8, 13-16 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments filed 9/14/2009 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

/P. H./
Examiner, Art Unit 2857
December 29, 2009